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10/805,776	03/22/2004	Gene A. Frantz	TI-37762	9940

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EXAMINER	
HA, LEYNNA A	

ART UNIT	PAPER NUMBER
2135	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/805,776	Applicant(s) FRANTZ, GENE A.	
	Examiner LEYNNA T. HA	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-2~~5~~ have been examined and are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-2, 4-5, 11-15, and 17-20 are rejected under 35**

U.S.C. 102(e) as being anticipated by Folmsbee (US 7,225,322).

As per claim 1:

Folmsbee discloses a data processing unit for executing an encrypted software program, the data processing unit comprising:

a processor for decrypting the encrypted software program and for executing software program (col.7, lines 8-11 and col.10, lines 45-48), the processor including an identifying number; and (col.4, lines 45-54 and col.10, lines 35-40)

a memory unit, the memory unit storing the decryption procedure the encrypted program being encrypted using at least a portion of the identifying number; (col.8, lines 35-40 and col.22, lines 55-59; the bits are the claimed portion that is according to the key where the program encrypted using the bits (col.4, lines 62-67 and col.9, lines 35-48).)

wherein, when the processor is to execute the software program (col.5, lines 7-28 and col.9, lines 60-66), the software program is decrypted using the at least a portion of the identifying number. (col.19, lines 21-40)

As per claim 2: see col.5, lines 20-26; discussing data processing unit as recited in claim wherein the encrypted software program is stored in the memory unit.

As per claim 4: see col.4, lines 47-48; discussing the data processing unit as recited in claim 1 wherein the identifying number is a serial number.

As per claim 5: see col.4, lines 46-65 and col.8, lines 36-40; discussing the data processing unit as recited in claim 1 wherein the identifying number is associated with a plurality of data processing units.

As per claim 11:

Folmsbee discloses a data processing system, the system comprising:

a data processing unit, the data processing unit including an identifying number stored therein; and (col.4, lines 45-54 and col.10, lines 35-48)

a decryption unit, the decryption unit decrypting software programs (col.7, lines 8-11) using a decryption key based on the identifying number; (col.8, lines 35-40 and col.22, lines 55-59; the bits are the claimed portion that is according to

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the key where the program encrypted using the bits (col.4, lines 62-67 and col.9, lines 35-48).)

wherein the data processing unit decodes an encrypted software program (col.5, lines 7-32 and col.19, lines 21-40) applied thereto using the decryption key. (col.9, lines 60-66)

As per claim 12: see col.4, lines 47-48; discussing the system as recited in claim 11 wherein the identifying number is the data processing unit serial number.

As per claim 14: see col.5, lines 20-26 and col.10, lines 5-29; discussing the system as recited in claim 11 further comprising a memory unit in the data processing unit, the memory unit storing encrypted software programs.

As per claim 15: see col.7, lines 8-11 and col.19, lines 21-40; discussing the system as recited in claim 11 wherein an encrypted program is decrypted as an entity or on the fly prior to execution of the software program by the data processing unit.

As per claim 17: see col.7, lines 8-11 and col.9, lines 60-63; discussing the system as recited in claim 11 wherein an encrypted program is stored in the data processing unit.

As per claim 18: see col.5, lines 20-26 and col.10, lines 5-29; discussing the system as recited in claim 15 wherein decrypted portions of the software program are stored in a protected memory unit accessible to only the associated data processing unit.

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As per claim 19:

Folmsbee discloses a method for protecting a software file, the method comprising:

providing a target processor having an identifying/serial number accessible only to the target processor; (col.4, lines 45-54 and col.10, lines 35-48)

encrypting the software file using at least a portion of the identifying/serial number; and (col.8, lines 35-40 and col.22, lines 55-59; the bits are the claimed portion that is according to the key where the program encrypted using the bits (col.4, lines 62-67 and col.9, lines 35-48).)

applying the encrypted software file to the target processor. (col.7, lines 8-11)

As per claim 20: see col.4, lines 46-65 and col.8, lines 36-40; discussing the method as recited in claim 19 further comprising, in the target processor, decrypting the encrypted software file based on the identifying serial number.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 6-10, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Folmsbee (US 7,225,322), and further in view of Marchant, et al. (US 6,240,183).

As per claim 3:

Folmsbee did not discuss an external memory unit, wherein the encrypted software program is stored in an external memory unit.

Marchant discloses decryption of encrypted message is performed on the CPU and identification of which encryption algorithm to use and how many bytes to decode using each algorithm is determined externally in the security unit (Marchant on col.2, lines 57-61). The security unit is external to the computer thus preventing any hacker who can gain access to the computer from gaining access to the encryption schema stored in the security unit. Marchant discloses the security unit is still able to provide decryption information to the computer, yet the encryption schema stored within the memory of the external security unit is not able to be read by anyone gaining unauthorized access to the computer itself (Marchant on col.2, lines 30-38).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the teaching of Folmsbee with Marchant teaching the external memory wherein the encrypted software program is stored in an external memory unit because preventing any hacker who can gain access to the computer from gaining access to the encryption schema stored in the security unit and thus prevents the encryption algorithm being read by anyone gaining

unauthorized access to the computer itself (Marchant on col.2, lines 30-38 and 58-61).

As per claim 6:

Folmsbee discloses a method for protecting software programs, the method comprising:

providing a data processing unit with an identifying number; (col.4, lines 45-54 and col.7, lines 8-11 and col.10, lines 45-48)

encrypting a software program external to the data processing unit using at least a portion of the identifying number; and (col.8, lines 35-40 and col.22, lines 55-59; the bits are the claimed portion that is according to the key where the program encrypted using the bits (col.4, lines 62-67 and col.9, lines 35-48).)

decrypting the encrypted software program prior for execution (col.19, lines 21-40) of the software program by the data processing unit. (col.5, lines 7-28 and col.9, lines 60-66)

Folmsbee did not discuss an external memory unit, wherein the encrypted software program is stored in an external memory unit.

Marchant discloses decryption of encrypted message is performed on the CPU and identification of which encryption algorithm to use and how many bytes to decode using each algorithm is determined externally in the security unit (Marchant on col.2, lines 57-61). The security unit is external to the computer thus preventing any hacker who can gain access to the computer from gaining access to the encryption schema stored in the security unit. Marchant discloses the security unit is still able to provide decryption

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information to the computer, yet the encryption schema stored within the memory of the external security unit is not able to be read by anyone gaining unauthorized access to the computer itself (Marchant on col.2, lines 30-38).

Therefore, it would have been obvious for a person of ordinary skills in the art to combine the teaching of Folmsbee with Marchant teaching the external memory wherein the encrypted software program is stored in an external memory unit because preventing any hacker who can gain access to the computer from gaining access to the encryption schema stored in the security unit and thus prevents the encryption algorithm being read by anyone gaining unauthorized access to the computer itself (Marchant on col.2, lines 30-38 and 58-61).

As per claim 7: see Folmsbee on col.4, lines 46-65 and col.8, lines 36-40; discussing the method as recited in claim 6 further comprising the step of storing the identifying number in non-volatile memory unit accessible to the data processing unit.

As per claim 8: see Folmsbee on col.4, lines 47-48; discussing the method as recited in claim 7 wherein the identifying number is a serial number for the data processing unit.

As per claim 9: see Marchant on col.2, lines 30-38 and 58-61; discussing the method as recited in claim 7 wherein the encrypted software program is stored external to the data processing unit.

As per claim 10: see Folmsbee on col.4, lines 46-65 and col.8, lines 36-40; discussing the method as recited in claim 7 wherein the encrypted program is stored in data processing unit.

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As per claim 13: as rejected in claim 3 and see Marchant on col.2, lines 30-38 and 58-61; discussing the system as recited in claim 11 further comprising a memory unit external to the data processing unit, the memory unit storing encrypted software programs.

As per claim 16: as rejected in claim 3 and see Marchant on col.2, lines 30-38 and 58-61; discussing the system as recited in claim 11 wherein the encrypted program is stored external to the data processing unit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Folmsbee (US 7,225,322), and further in view of Hejna, et al. (US 5,287,508).

As per claim 21:

Folmsbee discloses an apparatus for secure transfer of software files, the apparatus comprising:

a first processor, the first processor having program for encrypting a software file; and (col.7, lines 8-11)

a second processor, the second processor having a program for decrypting software files using at least a portion of an identifying/serial number stored in the second processor (col.4, lines 62-67 and col.9, lines 35-48; the bits are the claimed portion that is according to the key where the program encrypted using the bits.), the stored identifying/serial number accessible only to the target processor; (col.4, lines 45-54 and col.10, lines 35-48)

wherein the first processor encrypts the software file using a copy of the at least a portion of the identifying/serial number. (col.8, lines 35-40 and col.22, lines 55-59)

Folmsbee suggests each CPU could be provided with different key (col.10, lines 45-54) which is individual keys for individual CPUs (col.22, lines 50-61) identified by serial numbers (col.1, lines 58-62). However, Folmsbee did not clearly discuss multiple processors such as the claimed first processor and a second processor.

Hejna, et al. discloses the plurality of processors and schedules processes according to the priority of the process (col.2, lines 50-67). Hejna discloses a multiprocessor system in which memory is shared by all processors can execute different process concurrently or can execute different threads (from one or multiple processes) concurrently (col.7, line 67 – col.8, line 16). Thus, make use of several processors to speed execution of the processes (col.8, lines 38-45).

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Therefore it would have been obvious for a person of ordinary skills in the art to combine the teaching of Folmsbee with Hejna teaching multiple processors because making use of several processors can execute concurrently and to speed execution of the processes (Hejna on col.8, lines 38-45).

As per claim 22: see Folmsbee on col.4, lines 46-65 and col.8, lines 36-40; discussing the apparatus as recited in claim 21 wherein the copy of the at least a portion of the identifying/serial number is accessible only to the first processor.

As per claim 23: see Folmsbee on col.4, lines 62-67 and col.9, lines 35-48; discussing the apparatus as recited in claim 22 wherein the at least a portion of the identifying/serial number is accessed by the first processor based on an indicia of the second processor.

As per claim 24: see Folmsbee on col.7, lines 8-11; discussing the apparatus as recited in claim 21 wherein an encrypted software file is stored in an unsecured storage unit.

As per claim 25: see Folmsbee on col.19, lines 21-40 and col.22, lines 55-59; discussing the apparatus as recited in claim 21 wherein the encrypted software file is stored in an unsecured storage unit prior to decryption.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEYNNA T. HA whose telephone number is (571) 272-3851. The examiner can normally be reached on Monday - Thursday (7:00 - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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